

Pioneer® New Media Technologies, Inc.

DR-U124X CD-ROM Drive

Note:

This DR-U124X Software Driver Installation Guide
was written to be used with the latest Version 2.20 of the
Pioneer IBM-PC & Compatible
DOS/Windows Drivers

DR-U124X Software Driver Installation Guide
January, 1995

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Table of Contents

1. INTRODUCTION	1 - 1
Set-Up and Driver Installation Overview	1 - 2
2. PRE-INSTALLATION NOTES	2 - 1
Back up diskettes	2 - 1
On-Line Help available during driver installation.....	2 - 2
Selection Methods	2 - 3
3. DOS / WINDOWS DRIVER INSTALLATION PROCESS.....	3 - 1
Inspection Checklist	3 - 1
Quick Installation	3 - 2
Quick Install Parameters.....	3 - 4
Operations Check	3 - 7
Using Your Pioneer CD-ROM Drive	3 - 8
Custom Installation Options	3 - 9
Installing more than one Pioneer CD-ROM Drive	3 -13
Using XDISC.....	3 -15
Multi Player Control (MPC) Program	3 -15
4. QUESTIONS & ANSWERS.....	4 - 1

Table of Contents

Appendices

Appendix A: Troubleshooting IBM-PC DOS / WINDOWS Driver Installation

Appendix B: Installation Overview — IBM PC & Compatibles

- Device Driver in CONFIG.SYS - Command Line Switches
- MSCDEX File in AUTO EXEC.BAT - Command Line Switches

Appendix C: Pioneer LaserFacts System

Appendix D: Pioneer Technical Resource Numbers

List of Figures

Figure 1	– DOS/WINDOWS Installer: Accessing On-Line Help	2 - 2
Figure 2	– DOS/WINDOWS Installer: On-Line Help Screen	2 - 2
Figure 3	– DOS/WINDOWS - Quick Install Process.....	3 - 2
Figure 4	– DOS/WINDOWS Installer: Main Menu	3 - 3
Figure 5	– DOS/WINDOWS - Quick Install Default Settings	3 - 3
Figure 6	– DOS/WINDOWS Installer: Select SCSI Host Adapter	3 - 4
Figure 7	– “Select Correct SCSI Host Adapter” / Overview	3 - 5
Figure 8	– DOS/WINDOWS Installer: To Begin Installation	3 - 5
Figure 9	– DOS/WINDOWS Installer: Installation Complete	3 - 6
Figure 10	– DOS/WINDOWS - Operations Check on Boot-Up	3 - 7
Figure 11	– DOS/WINDOWS - Using the Pioneer CD-ROM Changer ...	3 - 8
Figure 12	– DOS/WINDOWS Installer: Custom Settings Menu	3 - 9
Figure 13	– DOS/WINDOWS - Driver Parameters Menu	3 - 10
Figure 14	– DOS/WINDOWS - MSCDEX Parameters Menu	3 - 11
Figure 15	– DOS/WINDOWS - SCSI ID Parameters Menu.....	3 - 12
Figure 16	– DOS/WINDOWS - NOTICE Changes Not Saved	3 - 13

Introduction

Congratulations on the purchase of your new Pioneer CD-ROM Drive! The unit is packaged with floppy disks that contain device drivers necessary for installing the Pioneer CD-ROM Drive to in IBM-PC or compatible computer. The device drivers allow the CD-ROM Drive and the computer to communicate and exchange data. On the next page is a SET UP & DRIVER INSTALLATION OVERVIEW describing the steps to follow as you install the device driver software and begin using your Drive.

Also, carefully review the instructions in this manual prior to installing the software device drivers. Here is a synopsis of what you will find in each chapter.

Chapter 1 provides the Introduction to this Manual, a synopsis of subsequent chapters, and a Set Up & Driver Installation Overview.

Chapter 2 provides Pre-Installation Notes. This section recommends that you back-up the driver diskettes. It also explains conventions used in the manual and provides some tips for IBM-PC and Compatible computer users: Refer to Context-Sensitive ON-LINE Help during installation of drivers under DOS or Windows; Selection methods.

Chapter 3 provides an IBM-PC and Compatibles Driver Diskette Inspection Checklist; describes Quick Installation; Operations Check; Custom Installation Options; Installing more than one Pioneer CD-ROM Drive and using XDISC; Using the MPC utility included on the driver diskette.

Chapter 4 is Questions and Answers.

Set-Up & Driver Installation Overview

- 1) Install a SCSI host adapter (interface card) in the IBM PC or compatible computer, as per instructions from interface card Manufacturer.
- 2) With the computer power turned OFF, attach the proper SCSI cable, connecting the Pioneer drive to the computer SCSI interface card.
- 3) Set the SCSI ID number on the CD-ROM Drive. When it is the only device attached to an IBM or compatible computer, the factory-set SCSI ID at 0 should work just fine. Otherwise, set the SCSI ID to a number that is not used by any other device on the SCSI bus. **NOTE:** The Pioneer Installer for IBM-PC and compatibles will automatically search the SCSI bus and indicate the proper SCSI ID number, unless you over-ride this feature. See Chapter 3, page 3-14 for details.
- 5) Power-ON the computer and back-up the driver diskettes included with the Pioneer CD-ROM Drive.
- 4) Power-ON the Pioneer CD-ROM Drive.
- 6) Launch the Installer program included on the driver diskette. This will offer you a few simple options, then install the software drivers. See Chapters 3 for details.
- 7) Insert a CD-ROM disc, label side UP, into the disc tray and insert the disc tray into the CD-ROM Drive. You are ready to use your Pioneer DR-U124X CD-ROM Drive.
- 8) Reboot your computer. Follow the "Operations Check" for IBM-PC and compatibles. If you encounter any difficulties, refer to **Appendix A, Troubleshooting** at the back of this manual.

Pre-Installation Notes

Back Up Diskettes

The license agreement that is enclosed with your Pioneer product allows you to make a backup of the driver diskettes, in case your originals become lost, damaged or corrupted. We strongly recommend that you take this precautionary step before you proceed with the installation of your software device drivers.

Your DOS operating system comes with a utility such as a [DISKCOPY] and/or [COPY] command which you can use to make a duplicate disk. Follow the instructions in your DOS manual. Once the files have been backed up, it's a good idea to date and label the disk.

On-Line Help for IBM-PC & Compatible INSTALLATION

The Pioneer IBM-PC DOS/WINDOWS installation software has an On-Line Help feature available from all of the installation menus. This Help feature can be accessed at any time by pressing the [F1] key. On-Line Help is context-sensitive, so the Help Dialog Box that appears after pressing [F1] is directly related to the item highlighted at the time you press the [F1] key. Abbreviated Help information appears in the bar at the bottom of the screen.



Figure 1 - DOS/WINDOWS Installer: Accessing On-Line Help

For example, if you press [F1] when the highlight bar is on the QUICK INSTALL line, the Help screen in **Figure 2** will appear:

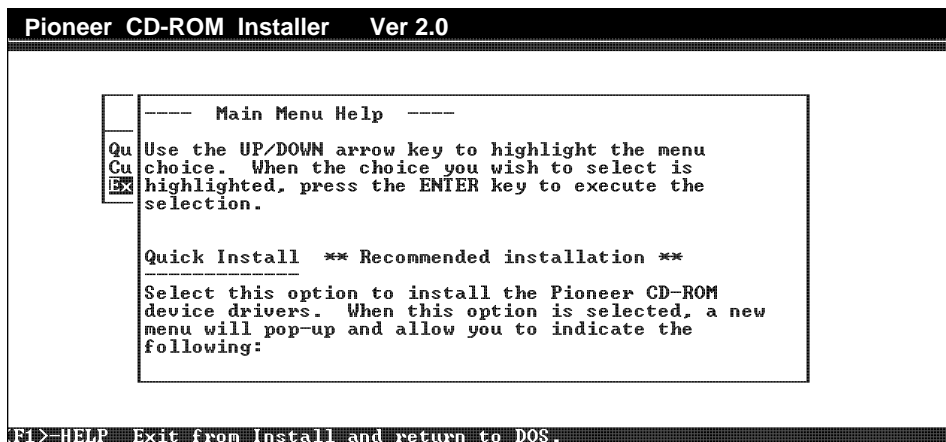


Figure 2 - DOS/WINDOWS Installer: On-Line Help Screen

Selection methods for IBM-PC & compatible users

The table below indicates how to select/deselect menu options and how to move around in the installation screens when installing the IBM-PC DOS/Windows drivers:

Action	Key Stroke
Move to another Menu	Use the Up↑ and Down↓ Arrow Keys or the [TAB] for selection Down [SHIFT-TAB] for Up until the correct menu selection becomes highlighted. You can also roll the mouse until the cursor appears on the line you wish to change, then click the left mouse button. Go back one Menu screen Press the “Esc” key or click the right mouse button.
Edit a Menu selection	There are four ways to edit a menu item: 1. Press the [GREY +] sign on the keyboard number pad. 2. Press the [SPACE BAR] then type the new entry. 3. Press the [INS] key then type the new information. 4. If you’re using a mouse, move the cursor over the selection you wish to change, Click the left mouse button, then type in the new information.
Using the Mouse to make a Menu Selection	Click or Double Click
Confirm the Menu Selection	Moving to the next line using the Down↓ arrow key will confirm your selection.
Bring up an adjacent menu	Press the [SPACE BAR] or press the [F3] key.
Confirm an Adjacent Menu selection	Press [ENTER].
Return to DOS	Select “Exit” from the Installation Menu
[F3]	Accesses the Help Screens for currently highlighted item. (See page 2-2 for details about using On-Line Help.)

Conventions used in this manual

This Installation Guide uses the following conventions to help you interpret and follow the information provided as you install and use the device driver software:

Characteristic and/or Key	Comment / Definition
Bold Type	Bold type represents a command which you must type. To carry out a command, type the bold-faced word(s) then press [ENTER]. Example: If you are instructed to type A: , type the A, type the : (colon) then press the [ENTER] key.
[] Square brackets	Square brackets are used to surround keys which you must press. DO NOT type the square brackets.
Function Keys	Function keys which you must press appear in “non-bold faced” text, in square brackets. Example: Pressing the [F3] key will bring up an adjacent menu.
<i>Italics</i> <i>Bold Italics</i>	Italics are used to emphasize a point. Bold Italics are used when referencing another section in this book.
SMALL CAPS BOLD	SMALL CAPS in bold are used to indicate Menu Titles.
ALL CAPS NO BOLD	All Caps, without bold-faced print, indicate a menu selection to be made.
[ENTER]	“Press [ENTER]” means that you must press the ENTER key to confirm a menu selection. Some instructions in this manual do not tell you to “Press” ENTER, they simply state [ENTER]. In those instances, the word “Press” is understood.
✓	The check mark is used to indicate a helpful hint or to note additional and pertinent information.

DOS /WINDOWS device driver installation

Inspection Checklist / PC

Pioneer® CD-ROM drives are packaged with a floppy disk containing software device drivers and the MSCDEX file for IBM-PC and compatible computers. The disk also contains an Installation program, Installation Help file, a file to load and remove the MPC control utility. Also included on the disk is XDISC, a program for use with Pioneer six disc changers that allows assignment of one drive letter to each daisy-chained Pioneer CD-ROM Changer. You do not need XDISC to use the Pioneer DR-U124X single disc drive or to daisy chain several DR-U124X units. Before you proceed with the installation, verify that you have the necessary files on the diskette:

- Step 1:** Exit your current computer application and go to the DOS prompt.
- Step 2:** Insert the diskette into the “A” or “B” drive.
- Step 3:** Type: **DIR A:** or **DIR B:** indicating the drive where the diskette has been inserted and press [ENTER]. C:>**DIR A:**

The following file names should be listed on the screen:

1. INSTALL.EXE
2. MSCDEX.EXE
3. DRD600.SYS
4. DRD60PS.SYS
5. DRD60ASP.SYS
6. INSTALL.CWA
7. INSTALL.HLP
8. MPC.COM
9. MPCRMV.COM
10. README.DOC
11. XDISC.EXE

If your disk does not contain all of the files listed above, please contact your Authorized Pioneer Dealer or call the Pioneer Bulletin Board System using your computer, modem and computer software to obtain current drivers. (See *Appendix D, Pioneer Technical Resource Numbers.*) After you’ve verified the contents of the disk, proceed to the next page, QUICK INSTALLATION instructions.

Quick Installation

Installing software drivers so you can use your Pioneer CD-ROM Drive with your computer is easy! This flow chart details the installation process. If you are installing from the DOS prompt, follow the DOS instruction path on the left side of the chart. If you are installing from WINDOWS, follow the path on the right.

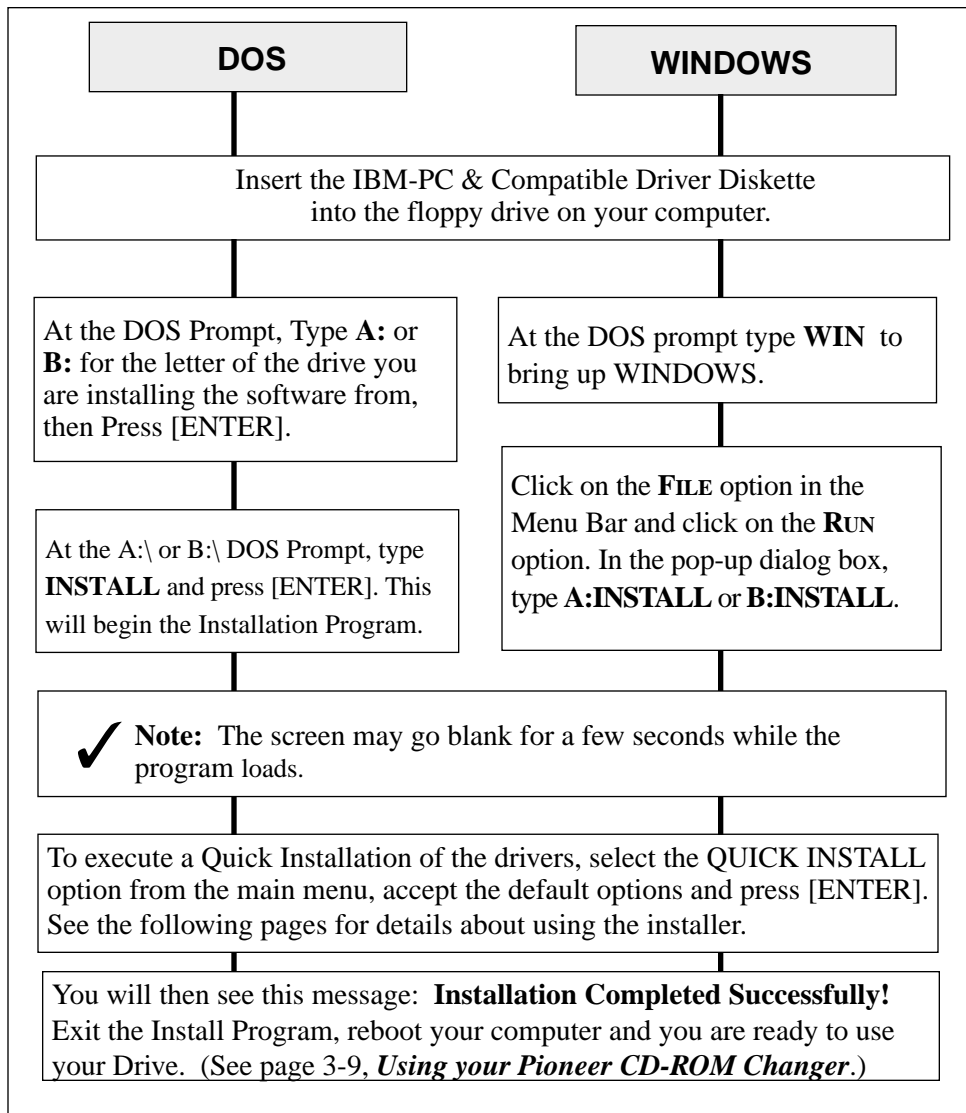


Figure 3 - DOS/WINDOWS - Quick Install Process

Click on QUICK INSTALL to bring up the QUICK INSTALL Parameters.



Figure 4 - DOS/WINDOWS Installer: Main Menu

The QUICK INSTALL parameters pop-up as an adjacent menu, as illustrated below:

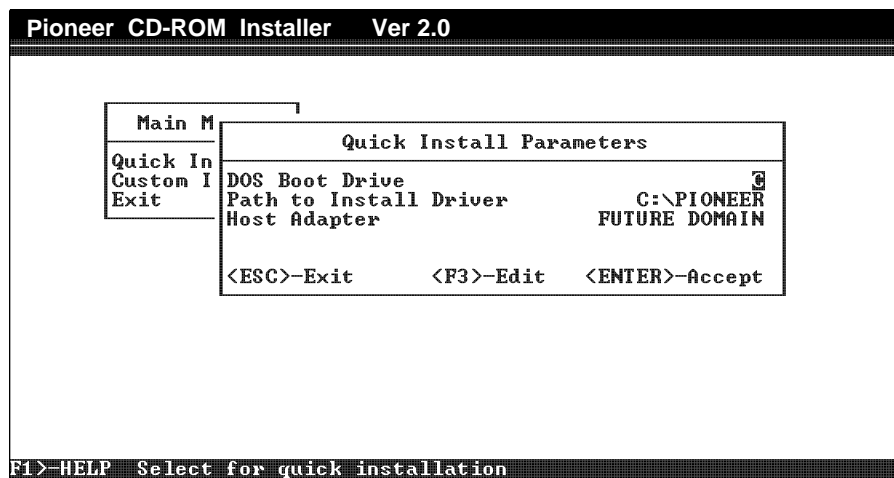


Figure 5 - DOS/WINDOWS - Quick Install Default Settings

These default settings are suitable for most computer configurations. If you need to change the settings, refer to the QUICK INSTALL Parameters on page 3-5.

- ✓ **NOTE:** An Auto SCSI ID Search is built into the installation program. This searches the SCSI bus and automatically identifies the SCSI ID number set on the CD-ROM Drive.

Quick Install Parameters

The default settings work well with most computer configurations. Most basic changes can be made by modifying the Quick Install Parameters, as described below:

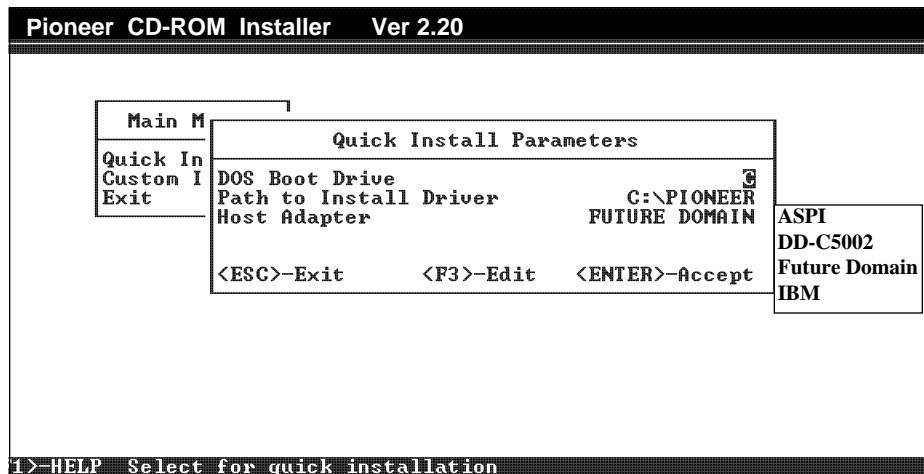


Figure 6 - DOS/WINDOWS - Select SCSI Host Adapter

Boot Drive - The drive from which MS DOS will boot.

The default DOS boot drive is C. To change the drive letter, highlight the menu selection for the DOS BOOT DRIVE, press the [F3] key to edit, type in the replacement drive letter and press the [ENTER] key.

Path - The directory path indicating where all the driver files will be copied.

The default path is C:\PIONEER. To change the path, highlight the menu selection for PATH TO INSTALL DRIVER, press the [F3] key to edit and then type in the replacement path name.

SCSI host adapter - Indicates the adapter to which the CD-ROM Drive is connected. The default setting for the SCSI host adapter is Future Domain. Either accept the default selection or Press [F3] to bring up the adjacent menu that allows you to select a different host adapter. Use the UP or DOWN arrow keys, or a mouse to indicate the kind of SCSI host adapter you are using. See **Figure 6**.

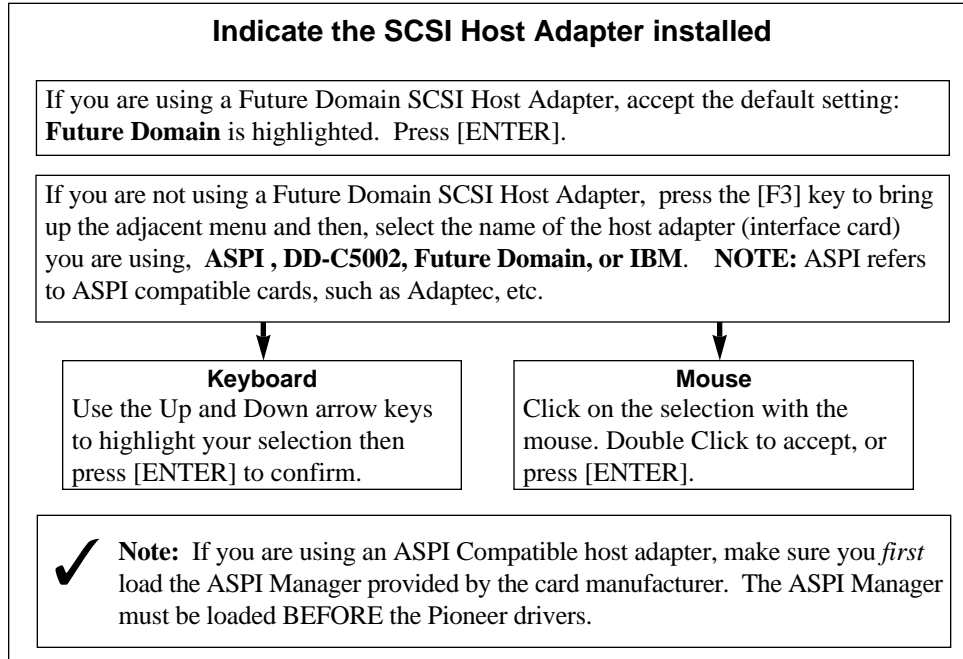


Figure 7 - Select Correct SCSI Host Adapter / Overview

To accept the QUICK INSTALL Parameters press the [ENTER] key from anywhere in the menu, or click on <ENTER>-Accept in the lower right corner of the menu. Then, the following screen will pop-up:

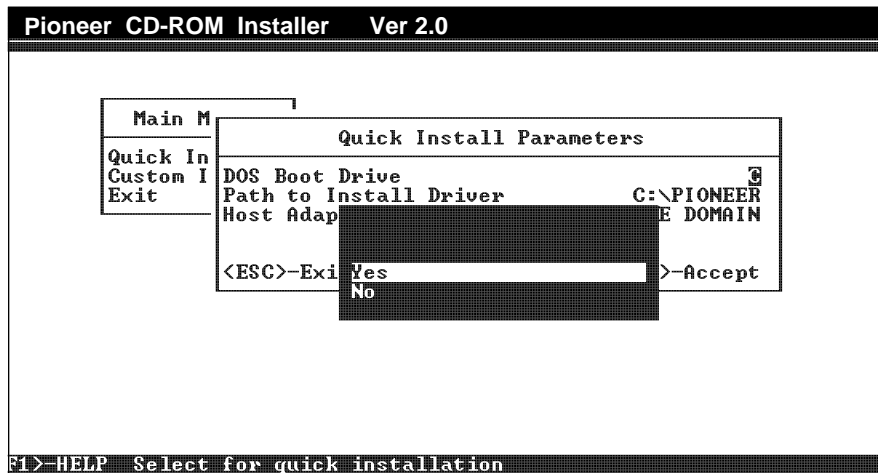


Figure 8 - DOS/WINDOWS Installer: To Begin Installation

If you are not satisfied with the options you chose, select NO. Then press the [Esc] key to go back one menu at a time. If you are satisfied with the options, select YES to start the installation. To abandon the installation, select EXIT, at the main menu.

After you select YES, the installation process will begin. While the program is installing the necessary files, a screen with "PLEASE WAIT" will blink.

Once the installation is complete, the following Dialog Box will appear:

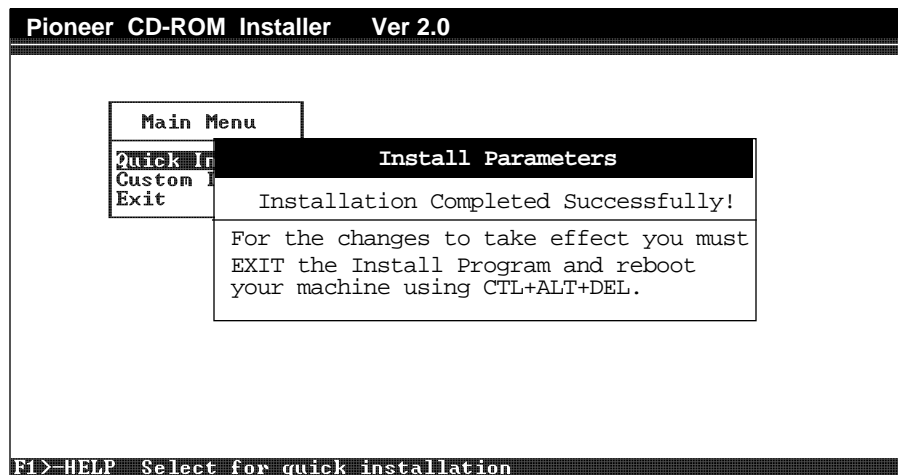


Figure 9 - DOS/WINDOWS Installer: Installation Complete

To exit the installation program, follow these steps:

- 1: Press the [ESC] key twice to return to the main menu.
- 2: Press the Down ↓ arrow key to move to the EXIT menu selection and press [ENTER].

This Completes the Quick Installation

Note: If you choose CUSTOM INSTALL, you must still return to QUICK INSTALL, indicate which host adapter you are using, and then answer YES when prompted to execute the installation.

Operations Check

You will have completed a successful installation when:

- The Pioneer software drivers are installed;
- The CD-ROM drive is correctly connected to your computer; and
- Messages similar to those below appear on your monitor during boot up:

```
PIONEER CD-ROM DEVICE DRIVER VER x.xx
for MSCDEX Ver. x.xx - IBM PC-XT/AT/AX PS/2/55, Future Domain
Copyright (c) Pioneer Electronic Corporation. 1990-1994
Portion (c) 1986-1994 Future Domain Corporation
      Inquiry ID=0 : PIONEER CD-ROM DR-U124X  XXXX

The LDP/CDP Device Driver for SCSI model Ver. 1.03
Copyright (c) Pioneer Electronic Corporation. 1990,1991

C:\>DOS\MSCDEX.EXE /D:MSCD000 /D:MSCD000 /E /M:4
MSCDEX Version 2.23
Copyright (C) Microsoft Corp. 1986-1993. All rights reserved.
      Drive E: =          Drive MSCD000 unit 0
```

Figure 10 - DOS/WINDOWS - Operations Check on Boot-Up

✓ **NOTE:** If the messages scroll by too quickly to read, you can pause the screen by quickly pressing [CTRL + S]. To continue with the boot up, press any key.

✓ **NOTE:** If you performed a QUICK INSTALLATION, the Installation program will begin with the first available letter on your system. Drive Letter E is often selected as your beginning drive letter. Under CUSTOM INSTALL, you can select a different starting drive letter.

✓ **NOTE:** Depending on your specific computer configuration, additional lines may be interspersed and some of the lines in the Operations Check

Using Your Pioneer CD-ROM Drive

You are now ready to use the Pioneer CD-ROM Drive connected to your computer system.

For use under DOS follow the instructions shown on the left side of the chart. For use under WINDOWS, follow the instructions on the right:

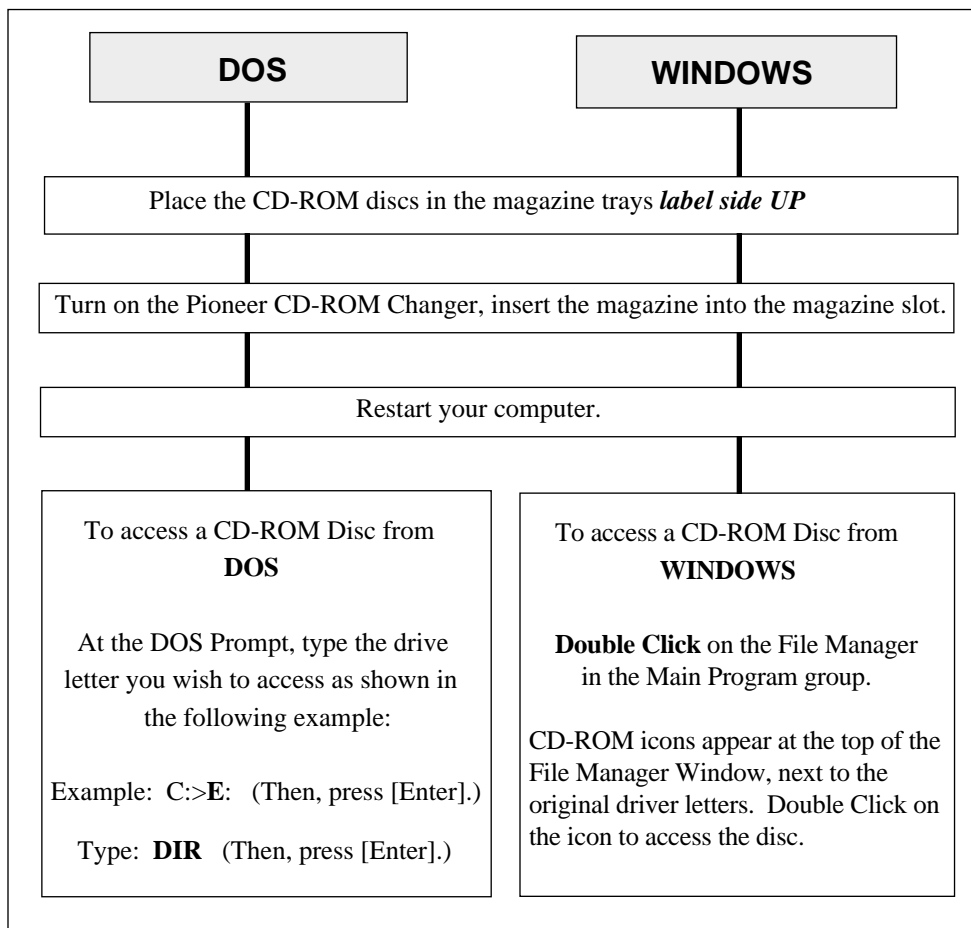


Figure 11 - DOS/WINDOWS - Using the Pioneer CD-ROM Drive

Custom Installation Options

Select CUSTOM INSTALL if you are installing two Pioneer drives in a daisy-chained configuration, or if you want to indicate some specific changes to the driver to complement your specific system configuration. **NOTE:** You must return to QUICK INSTALL, indicate the type of host adapter you are using, then select INSTALL to complete a CUSTOM INSTALLATION.

Custom Settings

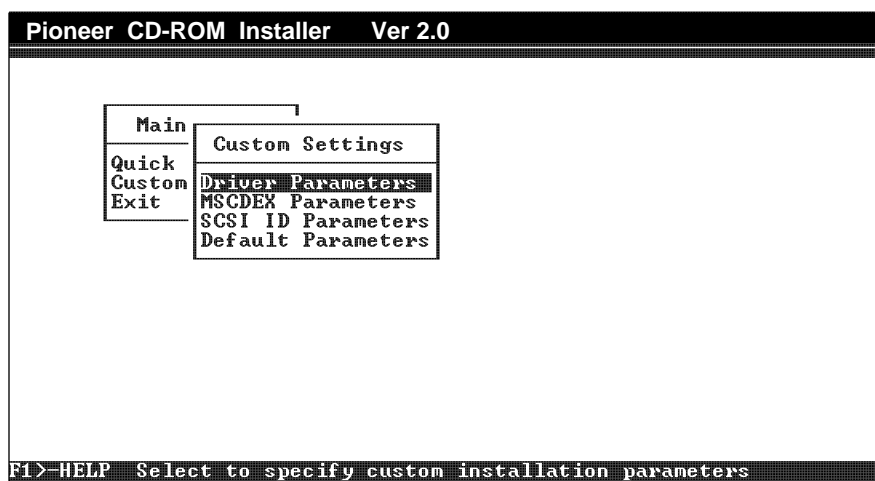


Figure 12 - DOS/WINDOWS Installer: Custom Settings Menu

Device Driver Parameters

This menu allows you to indicate the MSCDEX label name, Use EMS memory or Install Pioneer CDP support. (See page 3-10 for details.)

MSCDEX Parameters

The menu allows you to select MSCDEX parameters. (See pg. 3-11 for details)

SCSI ID Parameters

The Auto SCSI ID Search feature of the driver can locate up to seven daisy chained drives. There is no need to indicate SCSI IDs or number of discs installed using this menu. (See page 3-12 for details.)

Default Parameters

If you make any changes that you are not sure you want to include, select this option and all Custom Settings will be returned to their defaults. When the settings are returned to their defaults, the program returns to QUICK INSTALL. From there you have the option of installing or returning to the main menu to EXIT.

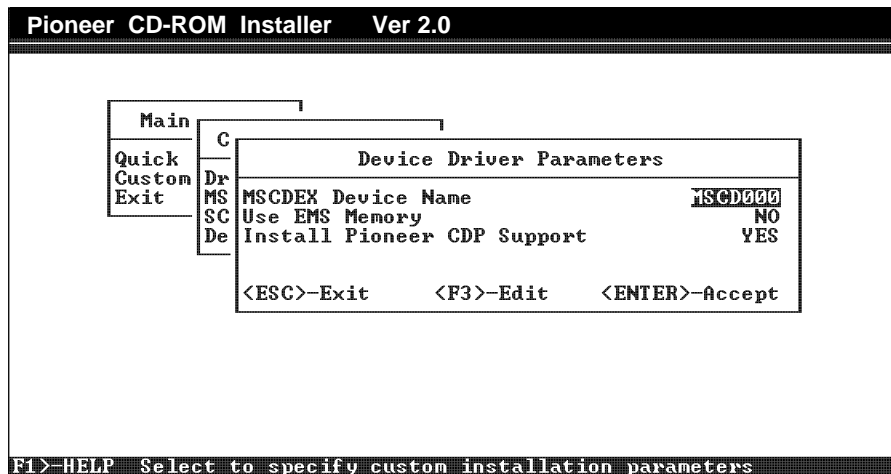
Device Driver Parameters

Figure 13 - DOS/WINDOWS - Driver Parameters Menu

MSCDEX Device Name

This is the label that will be declared in both the MSCDEX Device Driver line in the AUTOEXEC.BAT and the Pioneer Device Driver line in the CONFIG.SYS. The label name must match in both files.

Use EMS Memory

The drivers and MSCDEX can be loaded into Expanded memory by selecting this option. This will be indicated by the /E switch found in the device driver line of the CONFIG.SYS and in the MSCDEX driver line of the AUTOEXEC.BAT. See *Appendix B* for details: Driver Command Line Switches and MSCDEX Command Line Switches. If the computer does not have expanded memory, the drivers are loaded into conventional memory.

NOTE: If you are using a memory manager, you may need to reconfigure it after installation unless you switch the EMS Memory option to “NO”.

Install Pioneer CDP Support

Installing this option allows the player to be controlled by CD Player Commands, See Pioneer LaserFacts Document #32 170, 4 pages. Refer to *Appendix C, Pioneer LaserFacts System..*

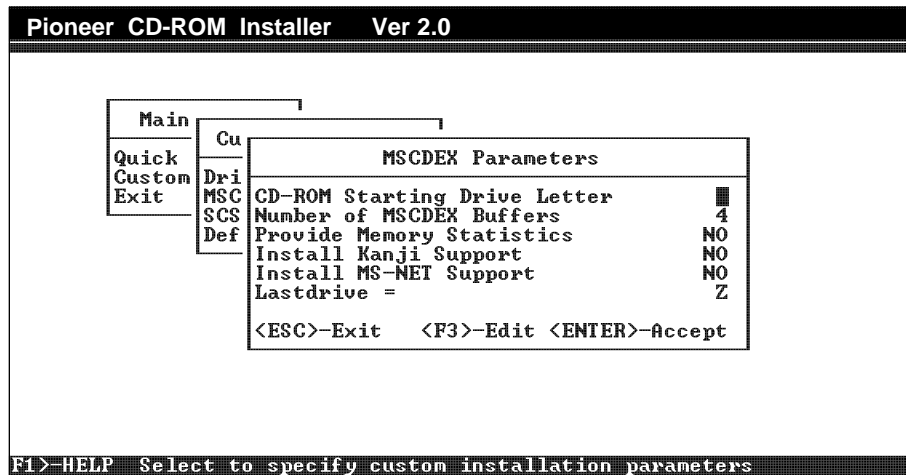
MSCDEX Parameters

Figure 14 - DOS/WINDOWS - MSCDEX Parameters Menu

CD-ROM starting drive letter

This option allows you to indicate any letter after the hard drives, hard drive partitions, or network volumes as the drive letter for Pioneer CD-ROM drive, or as starting drive letter for individual discs in a Pioneer CD-ROM Changer. This letter is reflected in the /L: switch where the first drive letter is declared. For example: /L:H.

Number of MSCDEX Buffers

This sets the buffer size (caching) for each driver letter. Each buffer uses 2K of memory.

Provide Memory Statistics

Provides memory usage statistics on how much memory is used by buffers, memory resident code, and resident data.

Install Kanji Support

Tells MSCDEX to use Kanji file structures, if present.

Install MS-NET Support

Tells MSCDEX to patch DOS to allow sharing of CD-ROM drives on MS-NET based networks.

Last Drive =

Indicates the final drive letter to be installed. The default is Z.

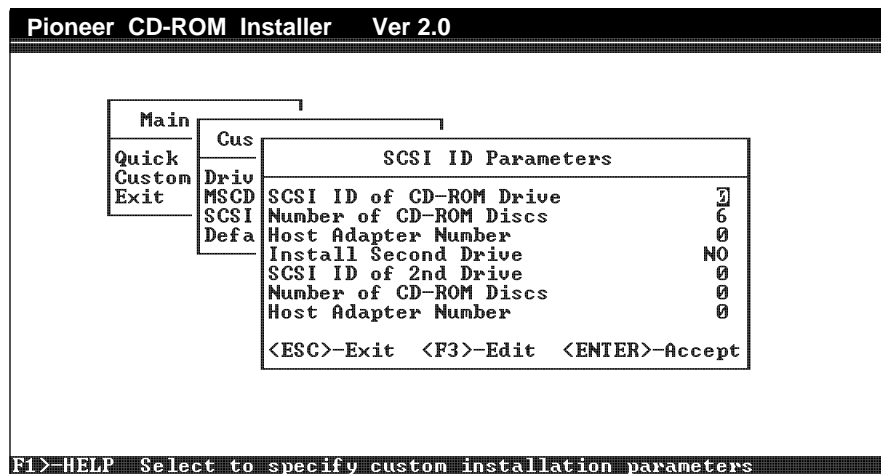
SCSI ID Parameters

Figure 15 - DOS/WINDOWS - SCSI ID Parameters Menu

SCSI ID of Drive

This indicates the the SCSI ID of the first drive. (0-6). **NOTE:** Make sure the SCSI ID number entered here matches the number set on the back of the drive.

Number of CD-ROM Discs in 1st Drive

This indicates the maximum number of discs you will be accessing in the first, Pioneer drive installed on a SCSI bus. **For the DR-U124X, this number must be 1.**

Host Adapter Number

This indicates the the ID of a host adapter to which the first drive is attached.

SCSI ID of 2nd Drive

This indicates the SCSI ID of a second, daisy-chained Pioneer drive. (0-6.) **NOTE:** This number must match the number set on the back of the second Pioneer drive on the SCSI chain.

Number of Discs in 2nd Drive

This indicates the maximum number of discs you will be accessing in a second, daisy-chained drive. **For the DR-U124X, this number must be 1.**

Host Adapter Number

This indicates the the ID of a host adapter to which a second drive may be attached.

Notice – Changes Not Saved

This dialog box will appear whenever you select Custom Install, change some of the parameter settings, and then decide not to save them. It is basically warning you that the changes have not been saved and the default settings have been retained. When you press [ESC] you will be returned to the Main Menu, with QUICK INSTALL highlighted.

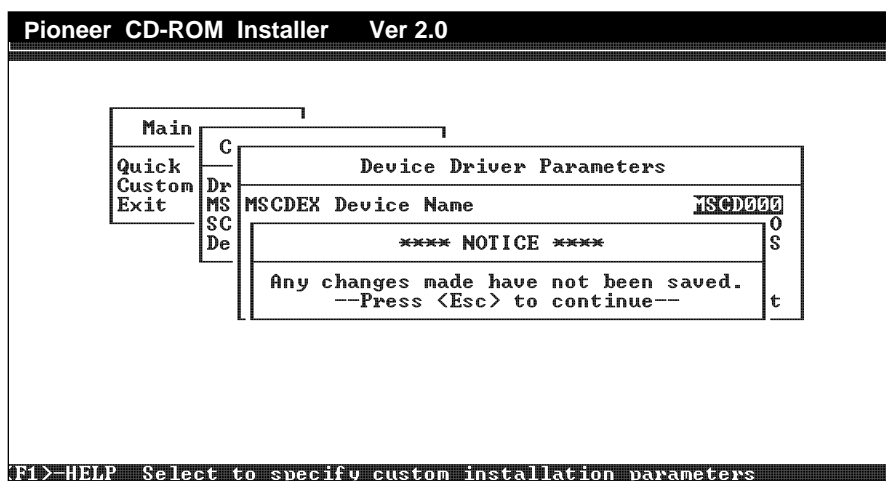


Figure 16 - DOS/WINDOWS - NOTICE Changes Not Saved

Installing More Than One Pioneer CD-ROM Drive

Two or more Pioneer drives can be installed on one SCSI chain by using the Pioneer device drivers for IBM-PCs and compatibles that ship with the unit. Use a 50 Pin SCSI ribbon cable to connect internal drives. Make sure the drives in the middle of the chain are not terminated and the last drive is terminated. Assign each drive its own specific SCSI ID number.

The Pioneer device drivers contain an Auto SCSI ID Search feature that automatically finds the Pioneer drives on the SCSI chain and assigns the correct number of drive letters for the number of discs installed. (For the DR-U124X, set the SCSI ID using pins on the back of the unit. The number of discs installed, of course, is always one.) NOTE: Any combination of single or six-disc Pioneer CD-ROM drives can be daisy chained: DR-U124X, DRM-604X, etc.

Using XDisc to Assign Single Drive Letters to Each Drive

A special utility, XDISC.EXE, is included on the Pioneer Driver Diskette. It was written to allow a single drive letter to be assigned to Pioneer six-disc changers. If you edit the CONFIG.SYS file and then launch XDISC, one drive letter will be assigned for each Pioneer CD-ROM drive installed on the SCSI Chain. When daisy chaining only DR-U124X single disc drives, XDISC is not needed.

To daisy chain three drives, the DR-U124X, A Pioneer DRM-604X and a Pioneer DRM-602X and assign each drive a single drive letter, edit the CONFIG.SYS Pioneer Device Driver line so it includes an /N: parameter switch set to 0 for each drive.

```
DEVICE= C:\DEV\DRD600.SYS /D:MSCD000 /N: 0,0,0,0 /C:CDP
```

Then, activate XDISC by typing **C:\PIONEER\XDISC**. Once XDISC is launched, type **XDISC** (space) **F** (space) **3** to access the third disc in the changer assigned drive letter "F". **NOTE:** Do not set 0 and other numbers together as /N: settings. To use **XDISC** the /N: switch must be set to all 0s.

Multi Player Control (MPC) Program

MPC for DOS

The Multi Player Control v 1.2 is a memory resident "audio" remote control program for the Pioneer CD-ROM Drive. Multi Player Control operates the Pioneer CD-ROM Drive as a CD Player during execution of most programs on a PC. Multi Player Control consists of one file to make it resident in memory and another program to remove it from memory. Use **MPC.COM** to install Multi Player Control Program and use **MPCRMV.COM** to remove it from memory.

Install it by typing **C:\Pioneer\MPC.COM**. Once it is installed you can bring it up with the <ALT+ HYPHEN> keys at any time. From within this program you can select the disc, track number, instruct the unit to play, pause, or eject the disc, and you can turn the volume up or down. Use the arrow key to select functions, and press the space key or enter key to execute a selected function. Use the <ESC> key to close the MPC window. Type **C:\Pioneer\MPCRMV.COM** to remove the program.

You can also send direct commands to the player from within MPC. Select the Command function to make the command window pop up. Then type a specific mnemonic command string such as TR3SEPL <CR> Carriage Return. This will search to TRACK 3, and PLAY. Or send the command 1KL <CR> to turn Key Lock ON and disable the eject button on the front of the player. Or send 0KL <CR> to turn Key Lock OFF. The player will send back an "R" indicating it received and executed the command. See *Pioneer LaserFacts Document #32170* for a complete list of CDP commands to control the CD-ROM Drive. See *Appendix C, Pioneer LaserFacts System*.

Calling MPC within Windows

This program can also be used in Windows. Run the Program Manager and open the MS-DOS Prompt icon. Read instructions and press <ALT+ENTER> to open a DOS window within Windows. This window can be moved and made smaller. Within that Window, press <ALT+ HYPHEN> to bring up MPC. Press <ESC> at any point to put MPC away. Type [EXIT] to return to Windows.

MPC for DOS Error Message:

"Device Driver Not installed. MPC Program is not resident"

MPC.COM will not install if the device driver is not installed or if the /C:CDP switch has not been included in the Pioneer device driver line. Check the Pioneer device driver line in the CONFIG.SYS to make sure that the Pioneer driver has been loaded and make sure the /C:CDP switch is at the end of the device driver line. Install the driver if it has not been installed, and/or type in /C:CDP at the end of the device driver line, if it is missing.

Failure to Remove MPC Program

If, for some reason, the MPC program is not removed When you type C:\Pioneer\MPCRMV.COM, don't worry. The next time you boot up our machine it will not appear.

Questions and Answers

Here are some common questions asked about Pioneer CD-ROM Drives.

What if there is no sound audible?

The disc is probably outputting Compressed Audio. This data needs to be transferred from the unit to the host computer for decompression and conversion to audio. Make sure you have a sound card installed to handle these tasks. If you do have a sound card installed and are still unable to hear compressed audio, check with the sound card manufacturer or disc publisher.

If the audio is CD-DA (Compact Disc-Digital Audio), it will be output through the headphone jack on the front of the unit, or through the audio connector on the back of the unit to an amplifier and speakers, powered speakers, or a sound board. To test that these connections have all been made properly, insert a compact audio disc (CD) into the disc tray, make sure the drivers are properly installed, then use MPC or Media Player under Windows to play the CD in the Drive.

Will a combination sound card/SCSI interface card work with Pioneer CD-ROM Drives?

A sound card with a SCSI interface included will work fine with Pioneer drives, as long as the SCSI card is ASPI compliant. Install the ASPI Manager that ships with the SCSI interface card, then install ASPI compatible drivers, Pioneer DRD60ASP.SYS. If possible, make sure the card is compatible with a 50 pin SCSI connector.

Can I use a Pioneer CD-ROM Drive with a sound card?

You can use the Pioneer units with any sound card as long as the card is supported by the actual software on the CD-ROM disc that you are using. Remember, if the CD-ROM disc uses compressed audio, you will need a sound card. Contact the CD-ROM disc publisher or distributor to find out what sound cards the product supports *before* you purchase a CD-ROM disc that includes compressed audio.

What should I do if the BUSY light flashes at one second intervals and the drive does not respond to commands?

This is a visual indicator from the drive that something is affecting the CD-ROM Drive's ability to perform. It may be a mechanical problem. Call Pioneer End-User Technical Support for more information. See *Appendix D, Pioneer Technical Resource Numbers*.

What should I do if the disc tray will not eject from the unit?

There are two possible causes of this symptom. One is that the software has locked the disc into the machine and will not let the user eject the disc. The other is that the user has set the last jumper pin to the left to ON, thereby disabling the eject switch on the front panel. In either case, to remove the disc, make sure that the last jumper switch is OPEN/OFF. Then turn your system OFF and back ON. This should allow the front panel eject button to work.

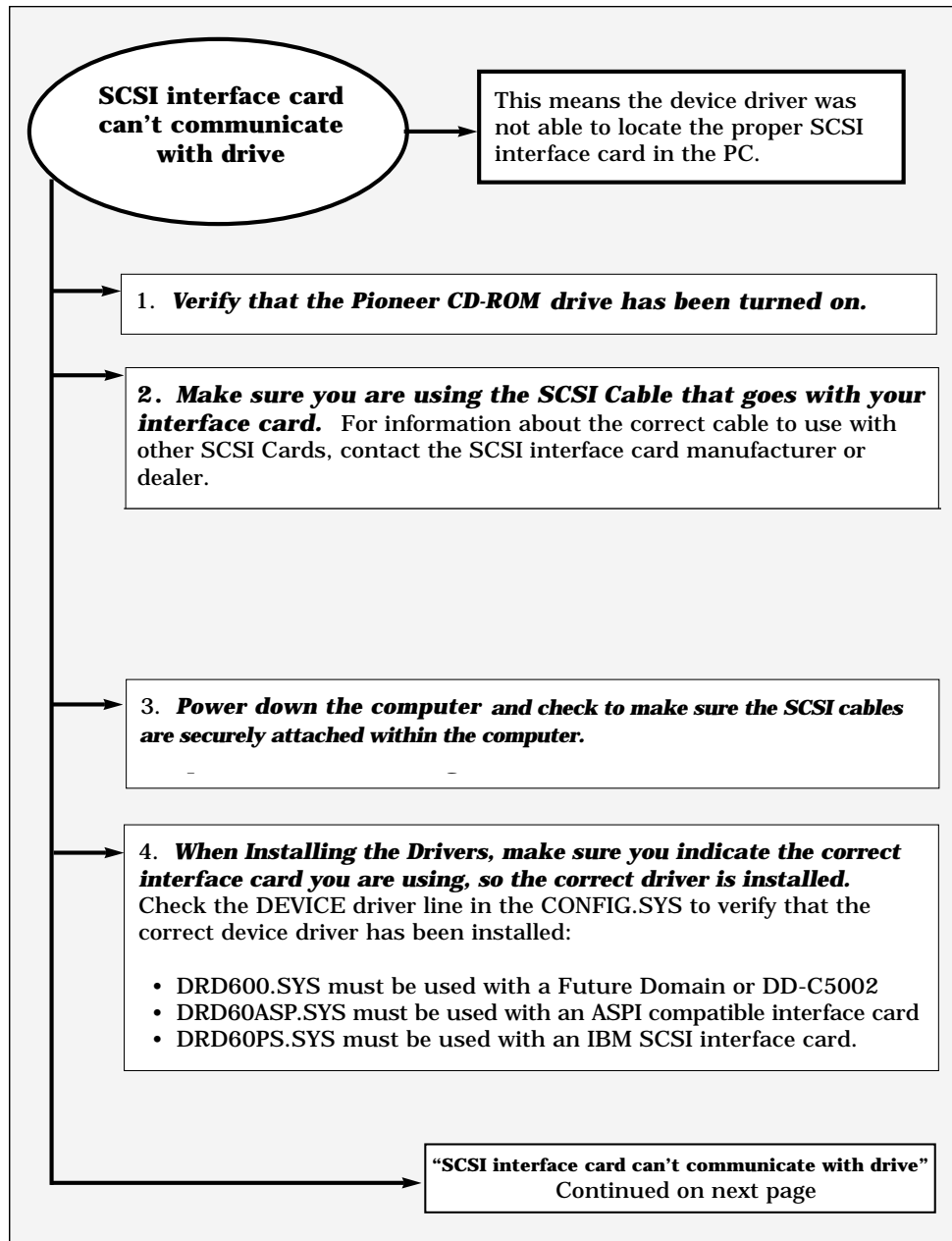
NOTE: If the disc still does not eject, call Pioneer End-User Technical Support. See *Appendix D* for *Pioneer Technical Resource Numbers*.

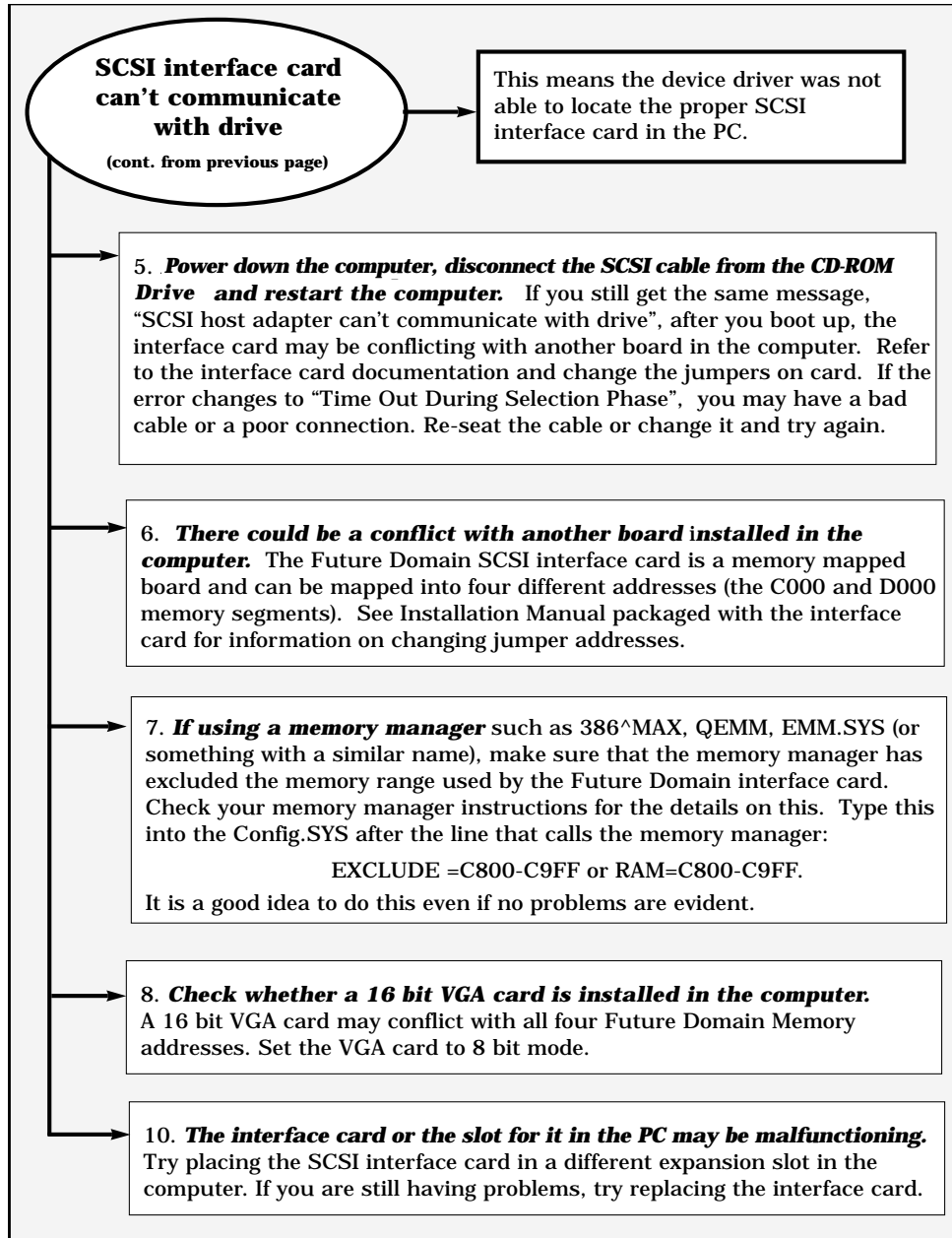
Troubleshooting IBM-PC DOS/WINDOWS Driver Installation

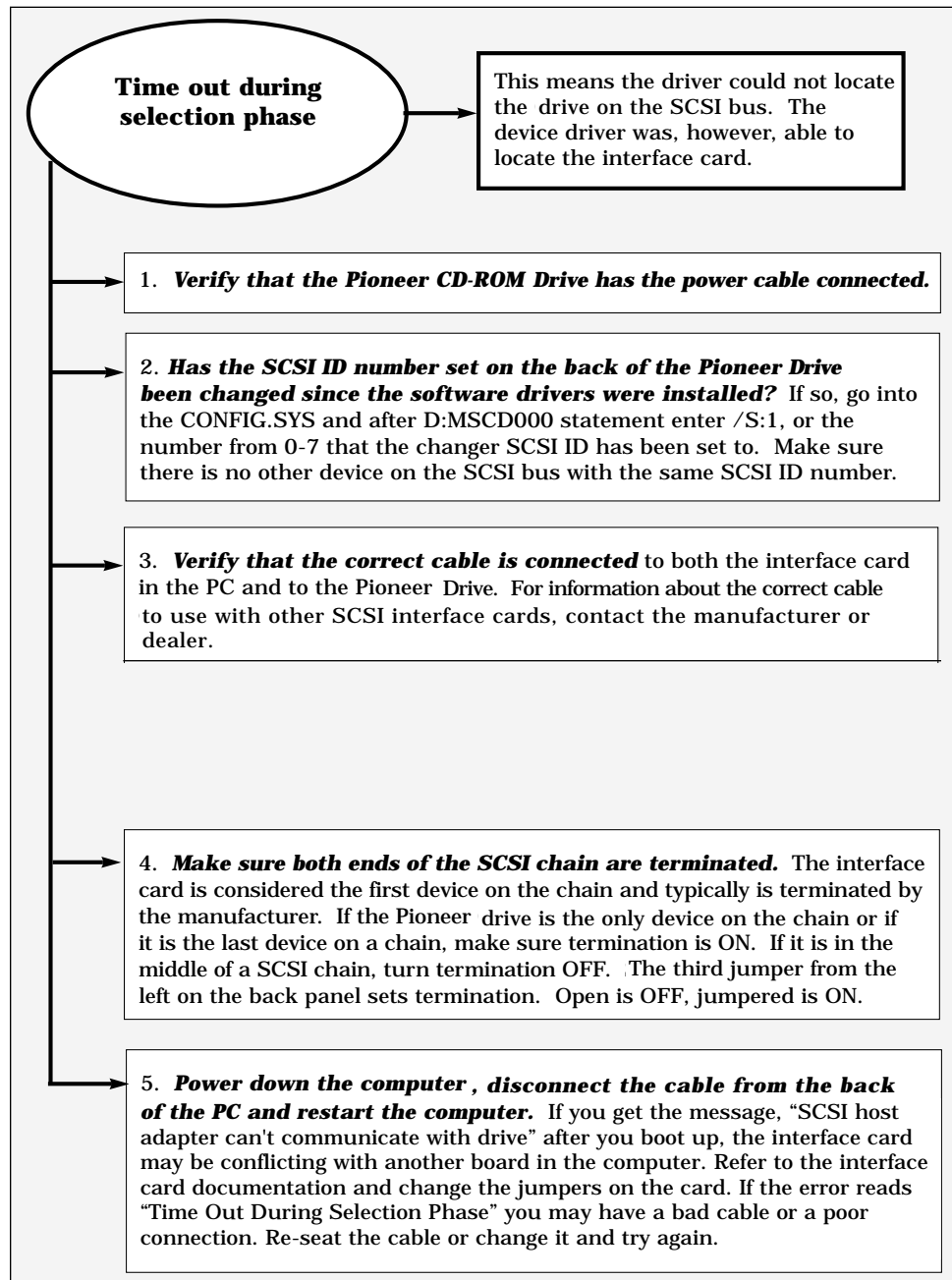
If the Pioneer CD-ROM Drive does not respond after running through the Operations Check on page 3-7 of this *Software Installation Guide*, note any error messages that may appear in the Inquiry ID line on boot up.

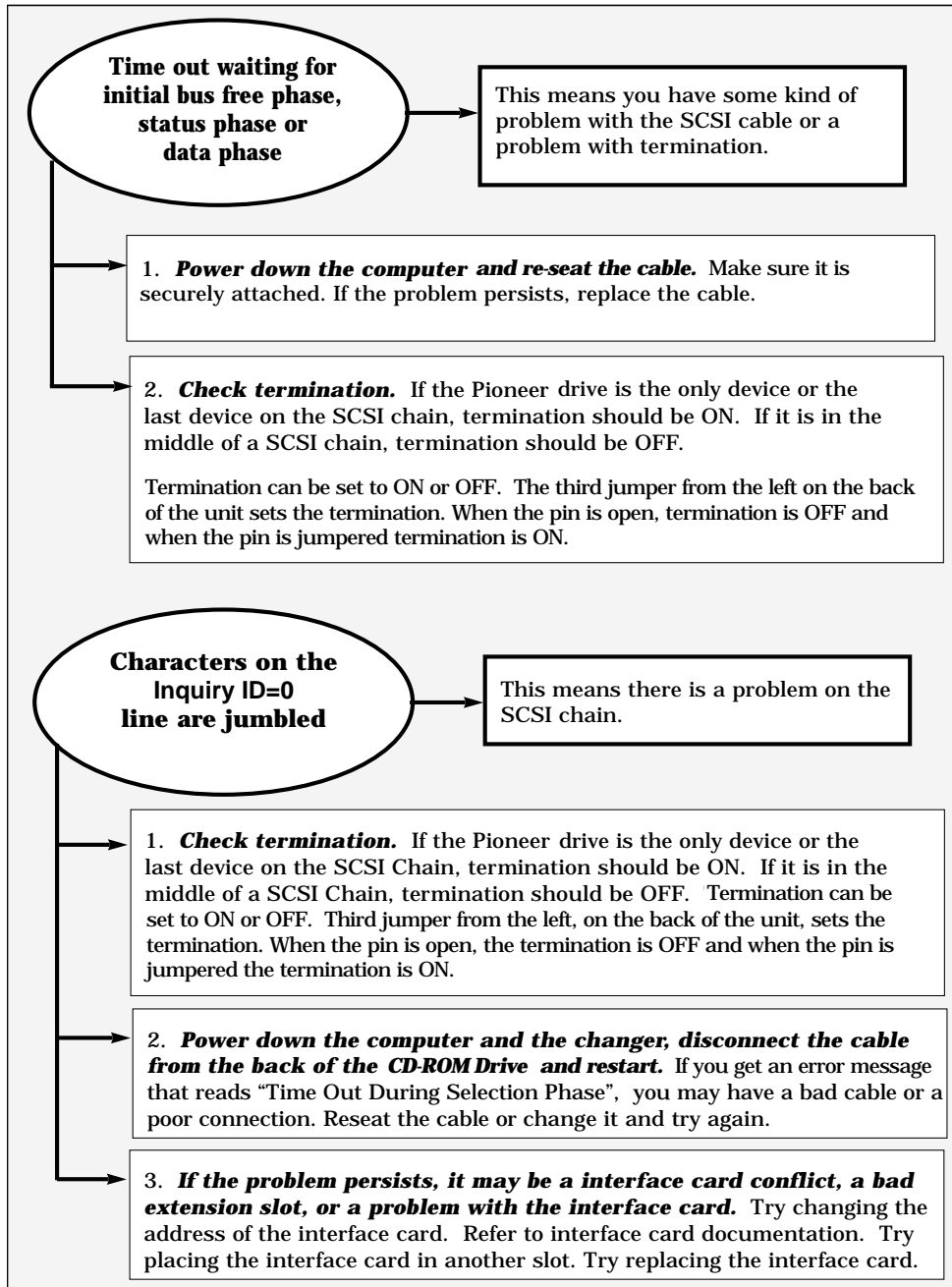
Error messages and how to correct them are described on individual pages of this Appendix as indicated below. If you do need to call for Pioneer End-User CD-ROM Technical Support (See *Appendix D* for *Pioneer Technical Resource Numbers*), please be prepared to describe any error messages and the contents of the CONFIG.SYS and AUTOEXEC.BAT files in your system. This will help Pioneer Industrial Representatives solve your problem more quickly.

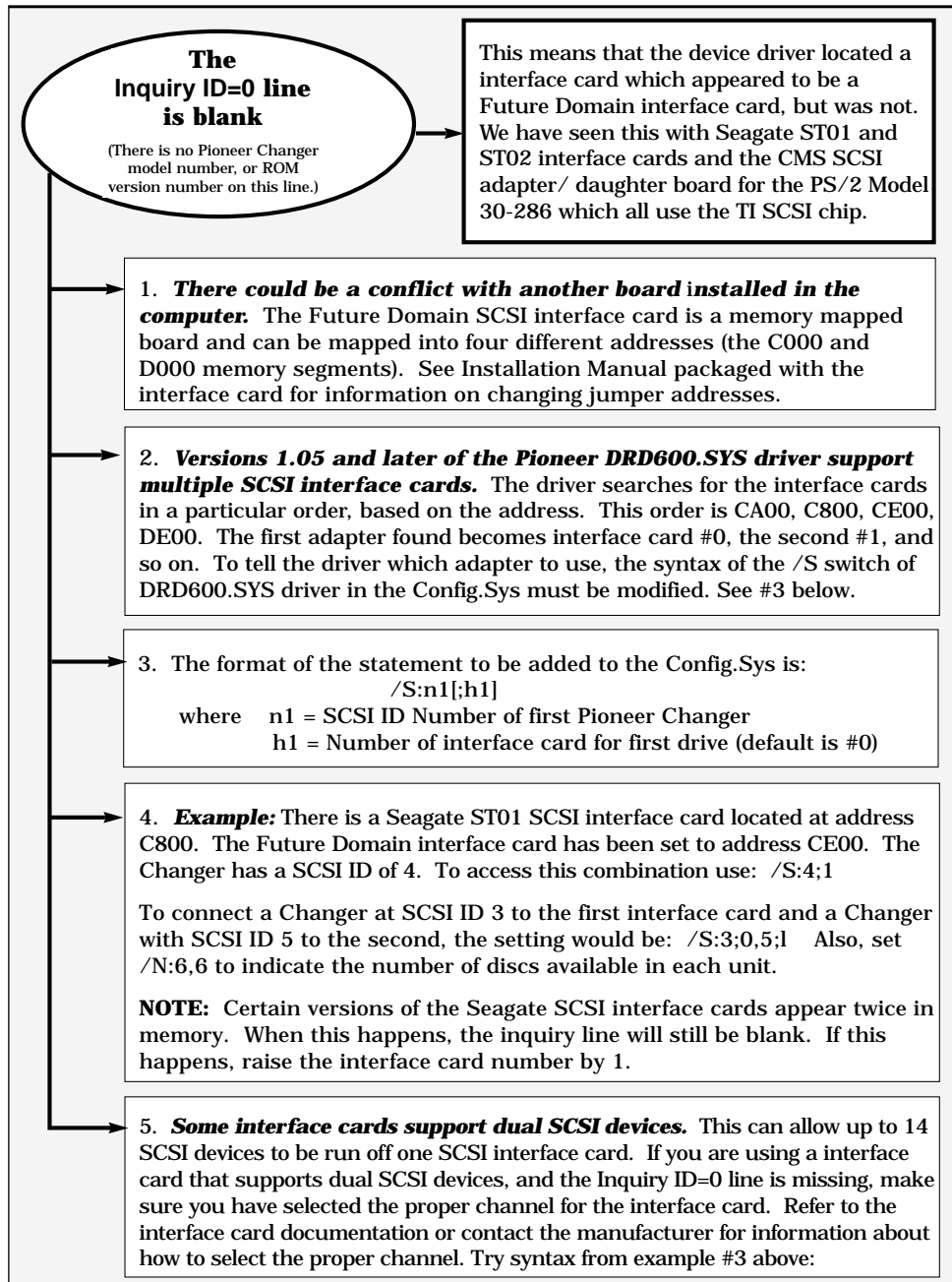
1. Driver Error Messages	page #
• SCSI interface card can't communicate with drive.....	A-2
• Timeout during selection phase.....	A-4
• Timeout waiting for initial bus free phase status phase or data phase	A-5
• Characters on the Inquiry "ID=0" line are jumbled	A-5
• The "Inquiry ID=0 Pioneer CD-ROM DR-U124X" line is blank	A-6
2. MSCDEX Error Messages	
• CDR101 Not Ready Reading Drive D	A-7
• CDR 103 Disk is not ISO 9660 or High Sierra	A-8
• Device Driver Not Found.....	A-8
• Incorrect DOS Version.....	A-9
3. DOS Error Message	
• Invalid Drive Specification	A-9
4. Hardware Issues. What to do if.....	
• The tray will not eject from the Drive.....	A-10
• The BUSY light flashes at one-second intervals and the drive does not respond to commands	A-11
• Boot problems	A-11

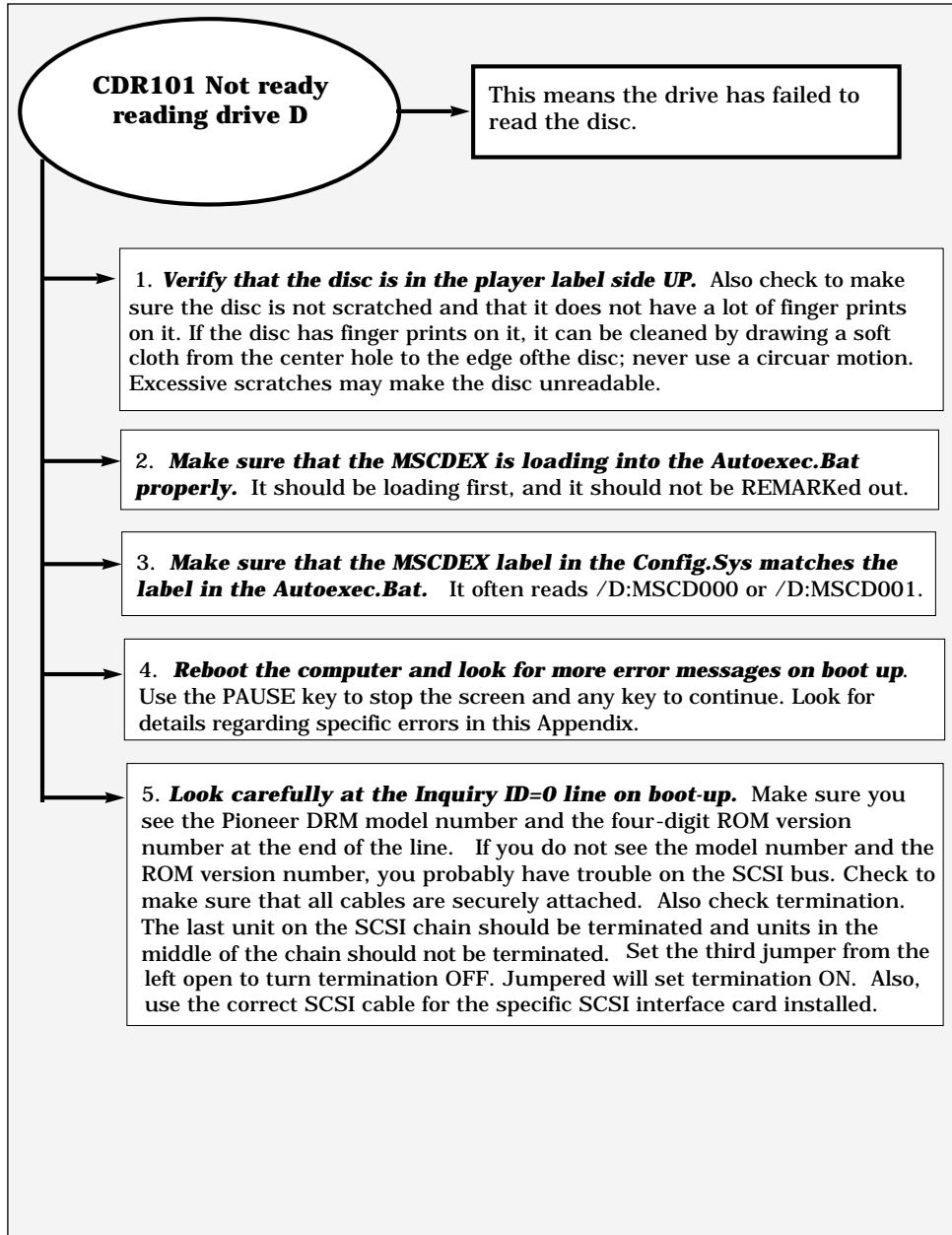


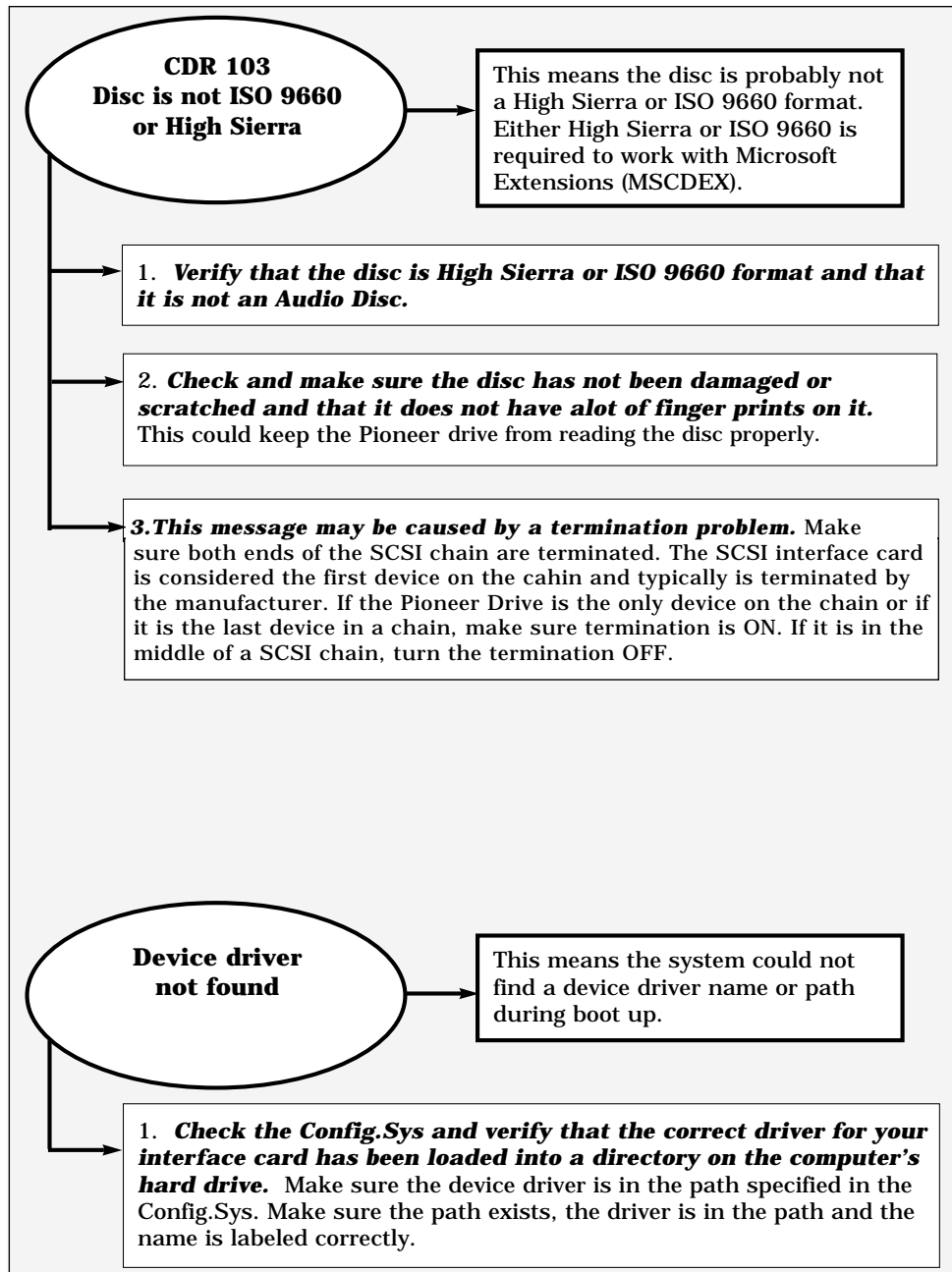


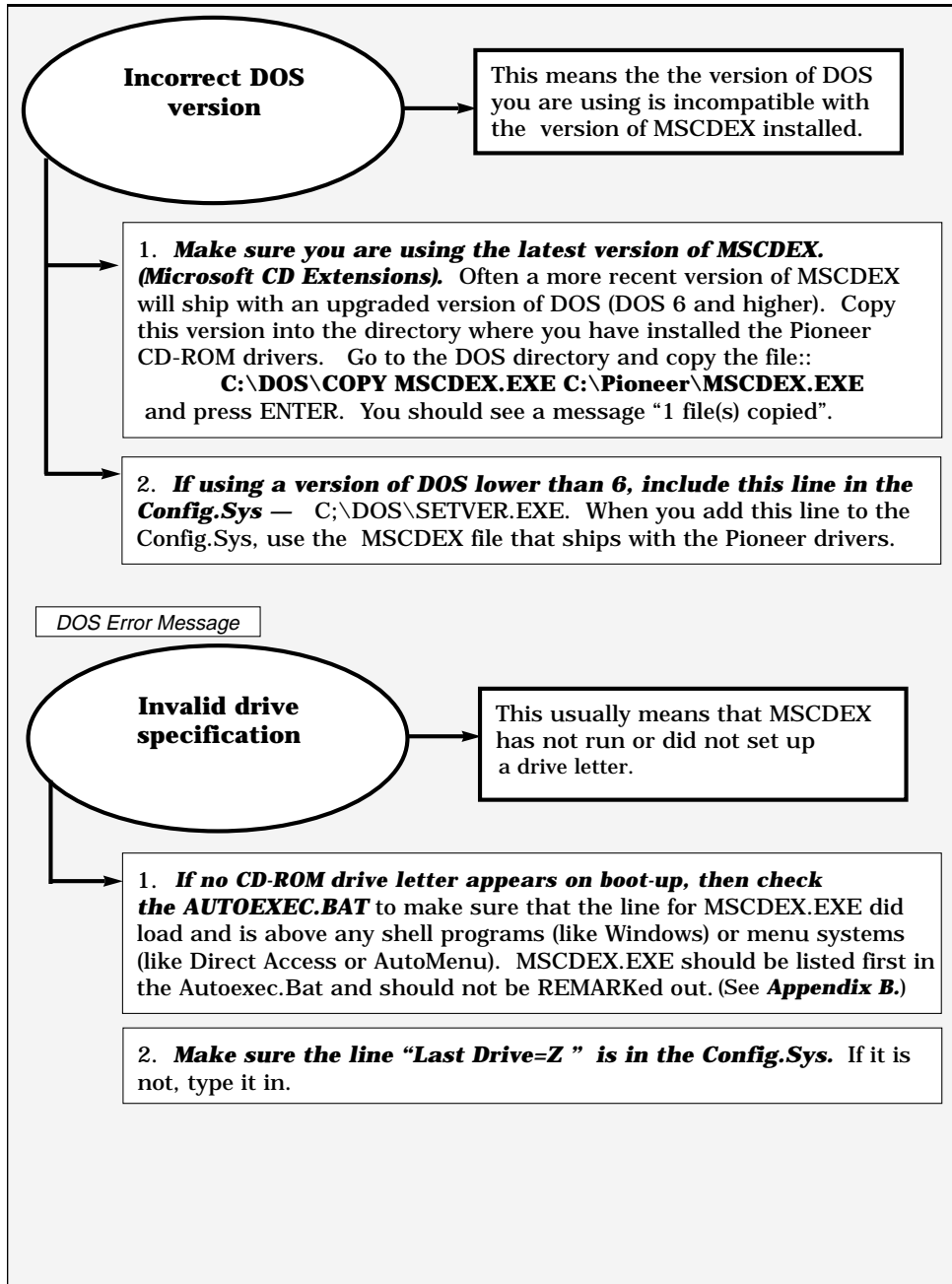


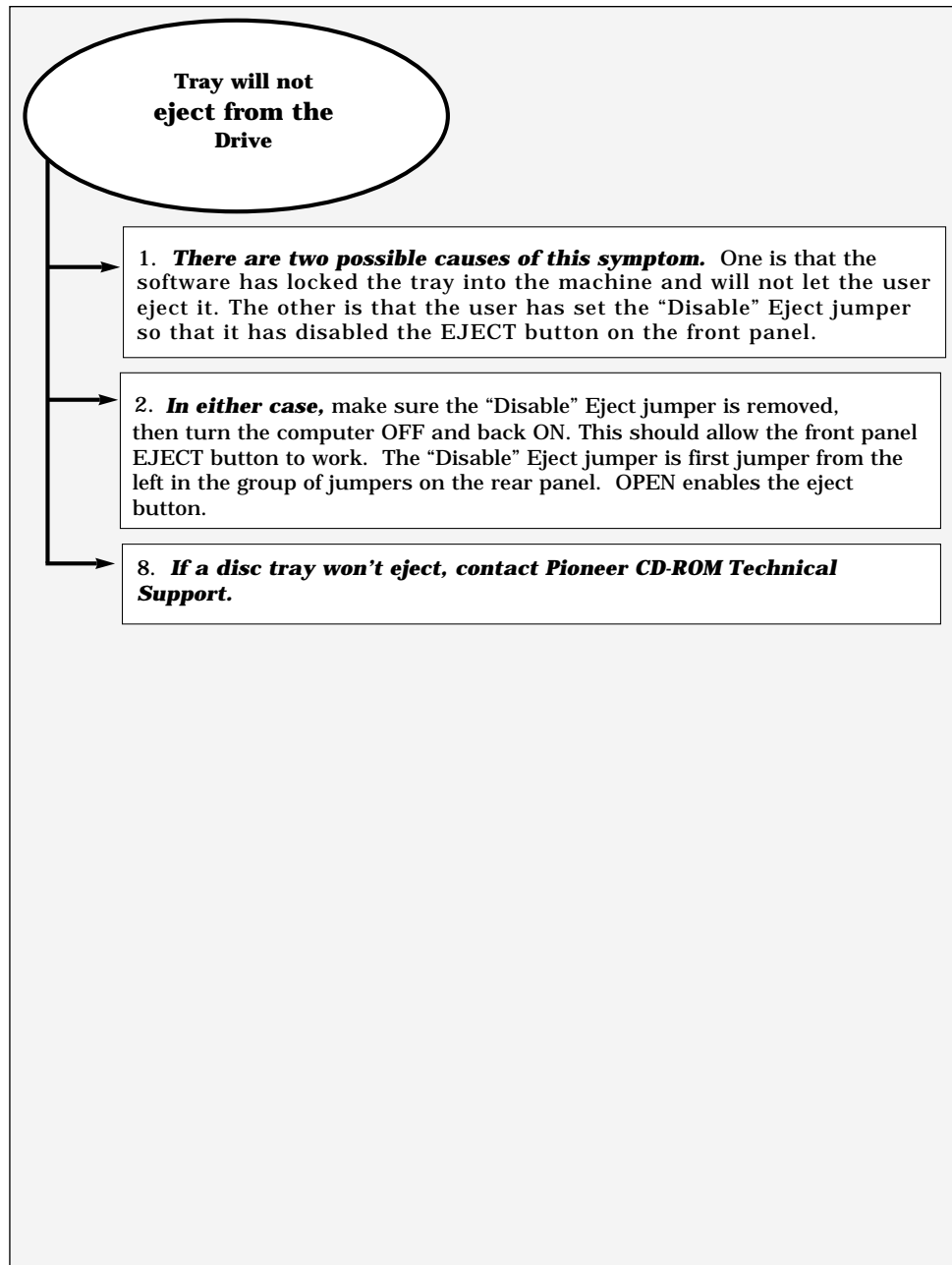


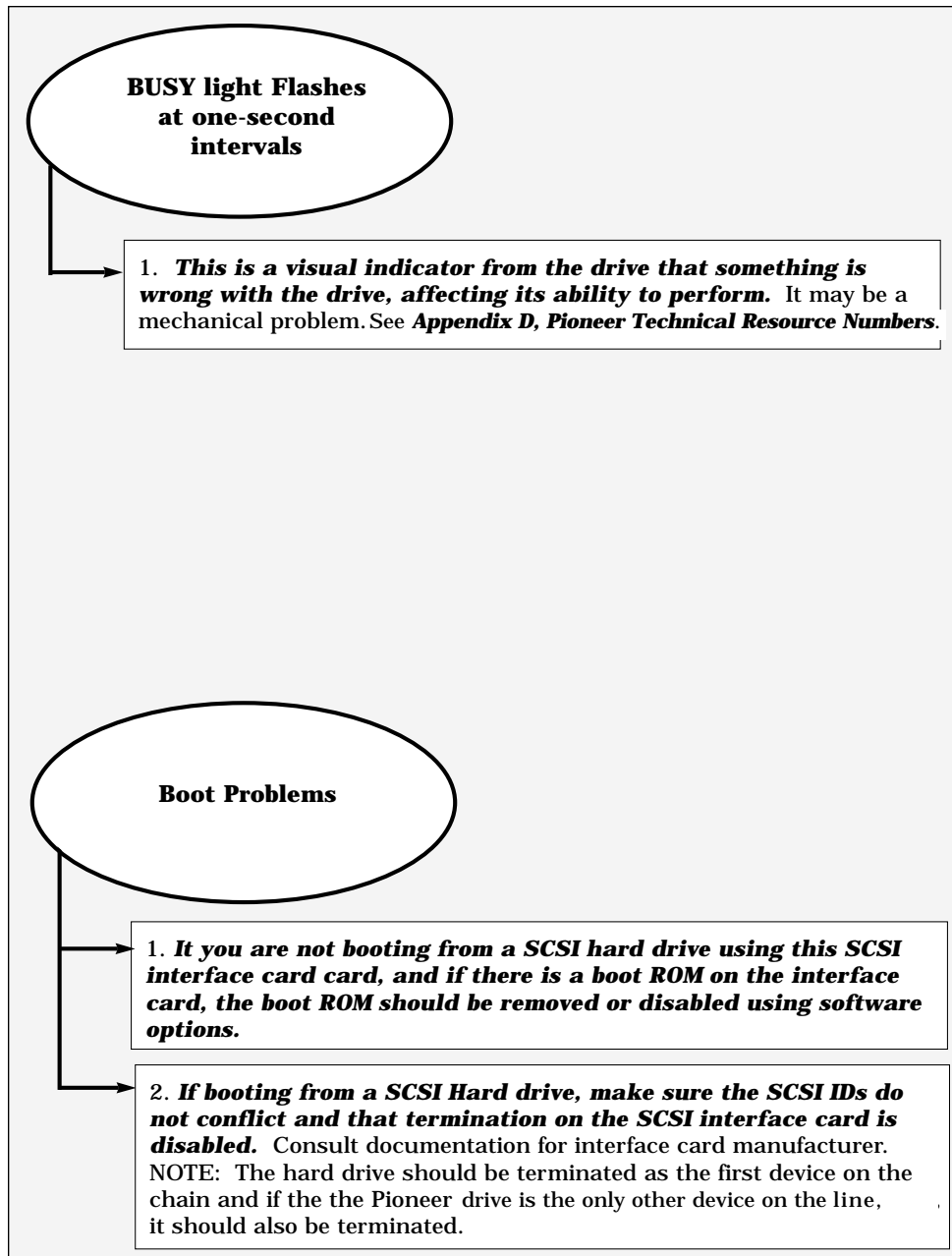












Installation Overview for IBM-PC & Compatibles Device Driver & MSCDEX File

The INSTALL program adds a line to the CONFIG.SYS File which tells the system to load the device driver that is correct for the SCSI host adapter installed in the computer and it adds or modifies a line in the computer's AUTOEXEC.BAT file to access MSCDEX (Microsoft CD Extensions).

Device Driver Loaded into CONFIG.SYS

The device driver line in the CONFIG.SYS indicates the Directory and PATH where it is located, as well as the SCSI ID number of the CD-ROM Changer, and it installs the CDP commands. The CONFIG.SYS File should look similar to this:

```
DEVICE = C:\DEV\DRD600.SYS /D:MSCD000 /C:CDP
```

The device driver allows communication to take place between a computer system and a peripheral device. It is loaded when the system is booted. Pioneer supplies the following three device drivers for use with several common SCSI host adapters:

1. DRD600.SYS

This device driver works with the Future Domain SCSI host adapters (the TMC and MCS series) and with the Pioneer DD-C5002 SCSI host adapter.

2. DRD60PS.SYS

This device driver works with the IBM SCSI host adapters for PS/2s.

3. DRD60ASP.SYS

This device driver works with any ASPI compatible host adapter. **NOTE:** When using an ASPI compatible host adapter, obtain the ASPI Manager file from the host adapter manufacturer or distributor. Install the ASPI Manager before you run the Pioneer Driver Installation Program.

During the QUICK INSTALLATION procedure, indicate the type of SCSI host adapter installed in your computer: ASPI Compatible, DD-C5002, FUTURE DOMAIN, or IBM. (The default is Future Domain). The INSTALL program then loads the proper driver into the CONFIG.SYS file.

See page B-2 for a descriptions of the Device Driver Command Line Switches.

See page B-3 for a description of the MSCDEX Command Line Switches

Device Driver command line switches:

DEVICE = C:\DEV\DRD600.SYS /D:MSCD000 /C:CDP

Switch	Description	Example
/D:(device name)	Specifies the device name of the CD-ROM device. This name MUST agree with the device name declared in MSCDEX.	/D:MSCD000
/N:n1[,n2]	Specifies the number of CD-ROM discs that are in the magazine. This is installed automatically with Version 2.0 and above of the drivers. You may not see this switch in the device driver line .	/N:1
/C:(device name)	Specifies the device name of the character device for CDP control	/C:CDP
/S:n1[;h1][,n2[;h2]]	Specifies the SCSI ID and the host adapter number of the DRM-600. This must be the same SCSI ID as the one set by the dip switches. This is installed automatically with Version 2.0 and above of the drivers. You may not see this switch in the device driver line .	/S:0
/B or /E	Specifies whether or not the device driver should load in a look ahead buffer for prefetch. /B -> Conventional Memory /E -> Expanded Memory	

MSCDEX.EXE command line switches:**MSCDEX /D:MSCD000**

Switch	Description	Example
/D: (device name)	Specifies the device name of the CD-ROM device. This name MUST agree with the device name declared in driver.	/D:MSCD000
/M:n	Specifies the number of cache buffers for MSCDEX to allocate.	/M:24
/E	Tells MSCDEX to use EMS (Expanded) memory for the cache buffers. If EMS is available, this can save lots of RAM.	
/L: (drive letter)	Specifies for MSCDEX the drive letter to start assigning the CD-ROM discs.	/L:M
/V	Provides memory usage statistics on how much memory is used by buffers, memory resident code, and resident data.	
/K	Tells MSCDEX to use Kanji file structures if present.	
/S	Tells MSCDEX to patch DOS to allow sharing of CD-ROM drives on MS-NET based networks.	

Pioneer LaserFactsSM System

Pioneer New Media Technologies, Inc., has placed a full library of technical resource materials on a *Pioneer LaserFacts System*. This is a FAX retrieval system that makes technical documents available 24-hours per day.

Please refer to the *LaserFacts Directory of Documents* to obtain the number of the document you wish to order. You can obtain a Directory by calling the LaserFacts line or by calling End-User CD-ROM Technical Support. See *Appendix D, Pioneer Technical Resource Numbers*.

To use the *Pioneer LaserFacts System*, follow these easy steps:

1.) Call: 1-201-327-9273 from your FAX phone.

When you call the *Pioneer LaserFacts System* from your FAX phone, your documents will be FAXed to you immediately; you can request up to 3 documents in one day.

2.) Respond to the system's voice instructions.

Enter a five-digit *Document Number* from the *Pioneer LaserFacts Document Directory* to indicate the document you wish to receive. If you do not have a directory to identify a specific *Document Number*, follow the menu options and have the directory FAXed to you. By responding to other menu options, you can access some of the most frequently requested documents without entering a document number.

3.) Hang up and wait for documents to be FAXed.

Your documents will be sent immediately when you call from your FAX phone.

Pioneer Technical Resource Numbers for US Customers

We hope that this *Software Driver Installation Guide* will be your first reference should questions arise about installing drivers for your Pioneer CD-ROM drive. There are, however, other valuable resources you can contact. Here are the *Pioneer Technical Resource Numbers* effective January, 1995:

End-User CD-ROM Technical Support — 1-800-872-4159

Call this number for information on driver installation, hardware set-up, specific hardware configurations and troubleshooting. Speak with a Pioneer Industrial Products Representative.

Pioneer Bulletin Board — 1-310-835-7980

Call this number using your computer, a modem and modem software. You can download the latest software drivers for Pioneer CD-ROM products.

Pioneer LaserFacts System — 1-201-327-9273

Technical Documents are available 24-hours per day when you dial this number from your FAX phone. See *Appendix C* for more information about the *Pioneer LaserFacts System*.